

**CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8)**Applicant(s): **Jacob H. Gunther**

Docket No.

**51764/3**

Serial No.

**10/616,001**

Filing Date

**July 9, 2003**

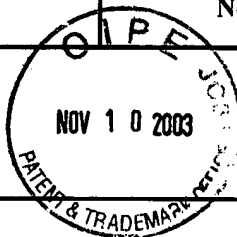
Examiner

Not yet assigned

Group Art Unit

**2681**

Invention:

**ECHO CANCELLATION FILTER**

I hereby certify that this **Information Disclosure Statement; PTO-1449 with copies of articles; postcard.**  
(Identify type of correspondence)

is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on **November 7, 2003**  
(Date)

**John R. Thompson**

(Typed or Printed Name of Person Mailing Correspondence)

  
(Signature of Person Mailing Correspondence)

**Note: Each paper must have its own certificate of mailing.**



PATENT APPLICATION  
Docket No.: 51764/3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: )  
 )  
 Jacob H. Gunther )  
 ) Art Unit  
 Serial No.: 10/616,001 ) 2681  
 )  
 Filed: July 9, 2003 )  
 )  
 For: ECHO CANCELLATION FILTER )

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97

TO THE COMMISSIONER FOR PATENTS:

Pursuant to his (her) (their) duty of disclosure, applicant(s) enclose(s) copies (a copy) of the document(s) listed on the accompanying Form PTO-1449.

1. This information disclosure statement is being submitted:

- a. ☒ Within three months of the filing date of the above-identified application or within three months of the date of entry of the national stage, or before the mailing date of the first Office action on the merits, whichever event occurs last. (No statement under 37 CFR 1.97(e) is required.)
- b. ☐ After the period set forth in paragraph 1a, but before the mailing date of either a final action or a notice of allowance. (Check box i. or ii.)
- i. ☐ A \$180.00 information disclosure statement submission fee set forth in 37 CFR 1.17(p) is enclosed.
- ii. ☐ A statement specified by 37 CFR 1.97(e) is set forth below.
- c. ☐ After the mailing date of a final action or notice of allowance and on or before payment of an issue fee. A statement specified by 37 CFR 1.97(e) is set forth below. A petition requesting consideration

of the information disclosure statement and the \$130.00 petition fee set forth in 37 CFR 1.17(i) are enclosed.

d. ☐ Concurrent with the filing of a Request for Continued Examination

2. ☐ The attorney or agent signing below hereby states that:

a. ☐ each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement.

b. ☐ no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.

3. ☐ Applicant(s) set forth below concise explanations of the relevance of each document not in the English language and/or selected document(s) in the English language.

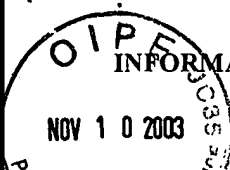
DATED this 7 day of November, 2003.

Respectfully submitted,



John R. Thompson  
Registration No. 40,842

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 <p style="text-align: center;"><b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)</p>	Docket Number (Optional) <b>51764/3</b>	Application Number <b>10/616,001</b>
	Applicant(s) <b>Jacob H. Gunther</b>	
	Filing Date <b>July 9, 2003</b>	Group Art Unit <b>2681</b>

**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	2002/0191779 A1	12/19/02	Pham	379	406.08	03/23/01
	A2	2002/0181699 A1	12/05/02	Pham et al.	379	406.08	03/23/01
	A3	2002/0114445 A1	08/22/02	Benesty et al.	379	406.01	12/05/00
	A4	6,516,050 B1	02/04/03	Tasaki et al.	379	3	10/25/00
	A5	6,507,653 B1	01/14/03	Romesburg	379	406.05	04/14/00
	A6	6,434,110 B1	08/13/02	Hemkumar	370	201	03/20/98
	A7	6,272,106 B1	08/07/01	Kawahara et al.	370	201	05/02/95
	A8	6,181,794 B1	01/30/01	Park et al.	379	410	10/07/97
	A9	5,764,753	06/09/98	McCaslin et al.	379	389	09/29/95
	A10	5,390,250	02/14/95	Janse et al.	379	410	12/17/91
	A11	5,295,136	03/15/94	Ashley et al.	370	32.1	04/13/92

**FOREIGN PATENT DOCUMENTS**

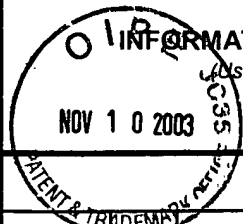
REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

	B1	Schobben et al., "A Frequency Domain Blind Signal Separation Method Based on Decorrelation," IEEE Transactions on Signal Processing, Vol. 50, No. 8, August 2002, pgs. 1855-1865.
	B2	Torkkola, Kari, "Blind Deconvolution, Information Maximization and Recursive Filters," Motorola, Phoenix Corporate Research Laboratories, 2100 East Elliot Road, MD EL508, Tempe, AZ 85284, USA, 4 pgs.

<b>EXAMINER</b>	<b>DATE CONSIDERED</b>
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**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



## INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.

51764/3

SERIAL NO.

10/616,001

Jacob H. Gunther

FILING

July 9, 2003

GROUP

2681

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A12	4,712,235	12/08/87	Jones, Jr.	379	410	11/19/84
	A13	4,268,727	05/19/81	Agrawal et al.	179	170.2	03/14/79
	A14	4,131,767	12/26/78	Weinstein	179	170.2	02/22/78
	A15	Re. 35,574	07/29/97	Russell et al.	380	6	05/23/95

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

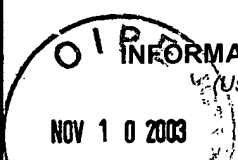
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		B3	Torkkola, Kari, "IRR Filters for Blind Deconvolution using Information Maximization," Motorola, Phoenix Corporate Research Laboratories, 2100 East Elliot Road, MD EL508, Tempe, AZ 85284, USA, 14 pgs.
		B4	Feder, et al., "Maximum Likelihood Noise Cancellation Using the EM Algorithm," IEEE Transactions on Acoustics, Speech, and Signal Processing, Vol. 37, No. 2, February 1989, pgs. 204-216.

EXAMINER

DATE CONSIDERED

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	<b>Jacob H. Gunther</b>	
	FILING <b>July 9, 2003</b>	GROUP <b>2681</b>

**U.S. PATENT DOCUMENTS**

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**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

		B5	Glentis, et al., "A Unified View - Efficient Least Squares Adaptive Algorithms for FIR Transversal Filtering," IEEE Signal Processing Magazine, July 1999, pgs. 13-41.
		B6	Breining, et al., "Acoustic Echo Control - An Application of Very-High-Order Adaptive Filters," IEEE Signal Processing Magazine, July 1999, pgs. 42-69.

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